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L1              2 S 4,704,121 OR 4704121/REF
L2              21 S 3,608,088 OR 3608088/REF
L3              14 S 4,135,253 OR 4135252/REF
L4              10 S 4,135,253 OR 4135253/REF
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=> d 11 1-2

1. 4,908,012, Mar. 13, 1990, Chronic ventricular assist system; John C. Moise, et al., 600*16; 415*900; 417*356; 604*151; 623*3

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16 MAY 90 10:44:22

U.S. Patent & Trademark Office

P0006

2. 4,817,586, Apr. 4, 1989, Percutaneous bloom pump with mixed-flow output; Richard K. Wampler, 600*16; 604*151, 264

=> d 12 1-21

1. 4,898,518, Feb. 6, 1990, Shaft driven disposable centrifugal pump; Lloyd C. Hubbard, et al., 417*360; 415*230, 900; 417*423.11, 423.14, 423.9

2. 4,869,642, Sep. 26, 1989, Variable output vortex pump; John R. Williamson, et al., 415*146, 26, 49

3. 4,838,889, Jun. 13, 1989, Ventricular assist device and method of

4. 4,785,515, Nov. 22, 1988, Method of making a centrifugal pump; Russell J.

10:44:49 COPY AND CLEAR PAGE, PLEASE

16 MAY 90 10:45:06

U.S. Patent & Trademark Office

P0007

Willette, 29*888.024; 415*206

5. 4,778,445, Oct. 18, 1988, Centrifugal blood pump with backflow detection; Lloyd C. Hubbard, et al., 604*4; 128*691; 417*20; 604*67

6. 4,725,207, Feb. 16, 1988, Automated peritoneovenous shunt; Henry Buchwald, et al., 417*412, 416, 420

7. 4,717,311, Jan. 5, 1988, Centrifugal pump; Russell J. Willette, 415*206, 182.1, 198.1, 227

8. 4,704,121, Nov. 3, 1987, Anti-thrombogenic blood pump; John C. Moise, 623*3; 415*112

9. 4,688,998, Aug. 25, 1987, Magnetically suspended and rotated impeller pump apparatus and method; Don B. Olsen, et al., 417*356; 415*900; 500*16;

10:45:06 COPY AND CLEAR PAGE, PLEASE

16 MAY 90 10:45:15

U.S. Patent & Trademark Office

P0008

623*3

10. 4,643,641, Feb. 17, 1987, Method and apparatus for sterilization of a centrifugal pump; Earl W. Clausen, et al., 415*174.3, 170.1, 900

11. 4,642,036, Feb. 10, 1987, Magnet ball pump; Niels O. Young, 417*353; 415*90; 416*3, 179; 417*420

12. 4,610,658, Sep. 9, 1986, Automated peritoneovenous shunt; Henry Buchwald, et al., 604*9; 417*417; 604*152

13. 4,606,698, Aug. 19, 1986, Centrifugal blood pump with tapered shaft seal; Earl W. Clausen, et al., 415*174.3; 277*92, 165, 169; 415*900; 417*360

14. 4,589,822, May 20, 1986, Centrifugal blood pump with impeller; Earl W. Clausen, et al., 415*174.3; 277*169; 415*112, 900; 416*184, 188

10:45:16 COPY AND CLEAR PAGE, PLEASE

16 MAY 90 10:45:26

U.S. Patent & Trademark Office

P0009

15. 4,584,994, Apr. 29, 1986, Electromagnetic implant; Charles Bamberger, et al., 128*79, 898; 310*40MM; 623*24, 26

16. 4,526,510, Jul. 2, 1985, Double-walled centrifugal fan scroll and system of operation; Joseph H. Hoffman, et al., 415*175; 60*646; 415*201, 232; 417*428

17. 4,473,423, Sep. 25, 1984, Artificial heart valve made by vacuum forming technique; Willem J. Kolff, 156*245, 285; 264*250, 255, 511, 545, 553, 554, 571; 623*2

18. 4,458,366, Jul. 10, 1984, Artificial implantable blood pump; David C. MacGregor, 623*3; 128*899

19. 4,427,470, Jan. 24, 1984, Vacuum molding technique for manufacturing a

10:45:26 COPY AND CLEAR PAGE, PLEASE

16 MAY 90 10:45:35

U.S. Patent & Trademark Office

P0010

ventricular assist device; Willem J. Kott, 100-...
289, 292, 308.4; 264*545; 17*384; 427*233; 623*3

20. 4,135,253, Jan. 23, 1979, Centrifugal blood pump for cardiac assist;
Sanford Reich, et al., 623*3; 415*112, 182.1, 202, 204, 900; 417*420; 600*16

21. 4,105,016, Aug. 8, 1978, Heart pump; Francis M. Donovan, Jr., 600*16;
415*900; 623*3

1. 4,898,518, Feb. 6, 1990, Shaft driven disposable centrifugal pump; Lloyd C. Hubbard, et al., 417*360; 415*230, 900; 417*423.11, 423.14, 423.9
2. 4,895,493, Jan. 23, 1990, Rotary pump; Harold D. Kletschka, 417*238, 316, 319, 420, 423.14

10:45:56 COPY AND CLEAR PAGE, PLEASE
16 MAY 90 10:46:05 U.S. Patent & Trademark Office P0011

3. 4,844,707, Jul. 4, 1989, Rotary pump; Harold D. Kletschka, 417*420
4. 4,778,445, Oct. 18, 1988, Centrifugal blood pump with backflow detection; Lloyd C. Hubbard, et al., 604*4; 128*691; 417*20; 604*67
5. 4,704,121, Nov. 3, 1987, Anti-thrombogenic blood pump; John C. Moise, 623*3; 415*112
6. 4,643,641, Feb. 17, 1987, Method and apparatus for sterilization of a centrifugal pump; Earl W. Clausen, et al., 415*174.3, 170.1, 900
7. 4,625,712, Dec. 2, 1986, High-capacity intravascular blood pump utilizing percutaneous access; Richard K. Wampler, 600*16; 128*DIG.3; 415*900; 604*52, 151, 264, 266; 623*3

10:46:08 COPY AND CLEAR PAGE, PLEASE
16 MAY 90 10:46:15 U.S. Patent & Trademark Office P0012

8. 4,606,698, Aug. 19, 1986, Centrifugal blood pump with tapered shaft seal:
Earl W. Clausen, et al., 415*174.3; 277*92, 165, 169; 415*900; 417*360

9. 4,589,822, May 20, 1986, Centrifugal blood pump with impeller; Earl W. Clausen, et al., 415*174.3; 277*169; 415*112, 900; 416*184, 188

10. 4,185,617, Jan. 29, 1980, Magnetically driven cardiac-assist pump system; Thomas B. Hutchins, 600*16; 417*420; 623*3

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